

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-5. (previously canceled)

Claim 6. (cancelled herein)

Claim 7. (currently amended) [[A]] The chemiluminescent light producing device in accordance with claim [[6]] 13 wherein: said ~~chemiluminescent light producing~~ chemical system retained therein is biodegradable.

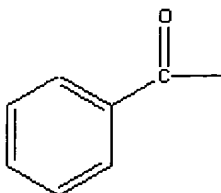
Claim 8. (currently amended) A process for selecting a biodegradable chemiluminescent light producing system including a chemical light oxalate system and a chemical light activator system comprising:

first selecting an oxalate solvent in accordance with the following criteria;

select a general set of solvent parameters required to impart particular biodegradable characteristics;

select a class of solvents that meet said parameters;

specify members of said class of solvents that contain a carboxy-phenyl group:



group the members in order of water miscibility;

select the member of said group that will optimize the solubility of active chemical light ingredients;

wherein a 50/50 mixture of propylene glycol dibenzoate and acetyltributyl citrate is selected as said oxalate solvent;

produce blends having different combinations of said active chemical light ingredients;

optimize said combination of solvents and active chemical light ingredients empirically as a function of differing absorption of different colors of light by different solvents;

secondly, select an activator solvent in accordance with the following criteria;

return to the class of solvents chosen above;

from this class of solvents, find all members that have a miscibility in water effective to stabilize a peroxide component of said chemical light activator system; and

blend activator components in said solvent having a miscibility effective to stabilize said peroxide component;

whereby visible light is emitted from said oxalate system and said peroxide system upon admixture and said admixture being consumable by natural bacteria ~~in a reasonable amount of time~~ such that a biodegradable chemiluminescent light producing system is defined.

Claim 9. (cancelled herein)

Claim 10. (cancelled herein)

Claim 11. (cancelled herein)

Claim 12. (currently amended) The ~~[[In a]]~~ chemiluminescent light producing ~~containment~~ device of claim ~~[[7]]~~ 13 wherein said chemical system comprises approximately 8.4% CPPO, 0.19% BPEA and 91.41% of a 50/50% mixture of propylene glycol dibenzoate and acetyltributyl citrate in said oxalate component and a mixture of approximately 85% triethyl citrate, 10% t-butanol, 5% of a 70%

concentration hydrogen peroxide, and 0.0085% sodium salicylate in said peroxide component.

Claim 13. (New) A chemiluminescent light producing device comprising a biodegradable polymeric composition, said biodegradable polymeric composition forming an outer containment device enclosing at least one inner frangible vial, said outer containment device and said vial containing a chemical system, said outer containment device and said vial each containing one of an oxalate component and a peroxide component of said chemical system, separately, said oxalate component and said peroxide component producing visible light when intermixed in said polymeric outer containment device, said oxalate component comprising a 50/50 mixture of propylene glycol dibenzoate and acetyltributyl citrate;

wherein said biodegradable polymeric composition comprises at least one polymeric material selected from the group consisting of polyglycolic acid, polyactic acid, polycaprolactone, polyhydroxybutyrate, polyhydroxyvalerate, polyvinyl alcohol, polyvinyl acetate, and polyetherketone.

Claim 14. (new) A chemiluminescent light producing device comprising a polymeric composition that disintegrates so as to lose its physical form, said polymeric composition forming an outer containment device enclosing at least one inner frangible vial, said outer containment device and said vial containing a chemical system, said outer containment device and said vial each containing one of an oxalate component and a peroxide component of said chemical system, separately, said oxalate component and said peroxide component producing visible light when intermixed in said polymeric outer containment device, said oxalate component comprising a 50/50 mixture of propylene glycol dibenzoate and acetyltributyl citrate;

wherein said polymeric composition comprises a starch/polyolefin combination whereby said polymeric composition is capable of disintegrating.

Claim. 15 (new) The chemiluminescent light producing device in accordance with claim 14 wherein: said chemical system retained therein is biodegradable.

Claim 16. (new) The chemiluminescent light producing device of claim 14 wherein said chemical system comprises approximately 8.4% CPPO, 0.19% BPEA and 91.41% of a 50/50% mixture of propylene glycol dibenzoate and acetyltributyl citrate in said oxalate component and a mixture of approximately 85% triethyl citrate, 10% t-butanol, 5% of a 70% concentration hydrogen peroxide, and 0.0085% sodium salicylate in said peroxide component.

Claim 17. (new) A chemiluminescent light producing device comprising a polymeric composition that is photodegradable so as to lose its physical form, said polymeric composition forming an outer containment device enclosing at least one inner frangible vial, said outer containment device and said vial containing a chemical system, said outer containment device and said vial each containing one of an oxalate component and a peroxide component of said chemical system, separately, said oxalate component and said peroxide component producing visible light when intermixed in said polymeric outer containment device, said oxalate component comprising a 50/50 mixture of propylene glycol dibenzoate and acetyltributyl citrate;

wherein said polymeric composition comprises photodegradable polymers that include UV sensitive components, whereby said ultraviolet (UV) sensitive components photodegrade when subjected to ultraviolet (UV) light.

Claim. 18 (new) The chemiluminescent light producing device in accordance with claim 17 wherein: said chemical system retained therein is biodegradable.

Claim 19. (new) The chemiluminescent light producing device of claim 17 wherein said chemical system comprises approximately 8.4% CPPO, 0.19% BPEA and 91.41% of a 50/50% mixture of propylene glycol dibenzoate and acetyltributyl citrate in said oxalate component and a mixture of approximately 85% triethyl citrate, 10% t-butanol, 5% of a 70% concentration hydrogen peroxide, and 0.0085% sodium salicylate in said peroxide component.

Claim 20. (New) The chemiluminescent light producing device of claim 17 wherein said UV sensitive components include one member selected from the group consisting of ketone carbonyl copolymers, carbon monoxide copolymers or metal salts.